REMARKS

By the above amendment, the specification has been amended to include the reference signs used in the drawings therein and additionally, in response to the drawing objection, submitted herewith is a proposed drawing correction of Fig. 1 to utilize reference numerals 1 and 2 therein. A corrected drawing is submitted herewith and applicants submit that by the amendment to the specification and the drawings, the objection to the drawings should now be overcome. Acceptance of the corrected drawing and the previously submitted drawings are respectfully requested.

Also, by the present amendment, claims 8 and 9 have been amended to recite further features of the present invention, it being noted that claims 8 and 9 are the only claims remaining in this application.

Turning to the amendments of claims 8 and 9, such claims have been amended to recite the feature of an apparatus for plasma processing of a nonvolatile material and that the end point determination and detection means which detect the end point of cleaning of the inner wall of the vacuum vessel by detecting emission wavelength, wherein claim 8 recites the features of detection of emission wavelength of reaction products generated when the cleaning of the vacuum vessel is effected utilizing a gas containing at least boron trichloride supplied to the vacuum vessel and a voltage of at least 500 V supplied to the Faraday shield. Claim 9 recites the features of detecting an emission wavelength of products formed from the vacuum vessel generated when the cleaning of the vacuum vessel is effected utilizing a gas containing at least boron trichloride and chlorine supplied to the vacuum vessel and a voltage of at least 500 V supplied to the Faraday shield, which features of claims 8 and 9 are described in connection with Figs. 9, 10, 12(d) and 13(c) of the drawings, and the corresponding description in the specification. Applicants submit that such features are not disclosed or taught in the cited art, as will become clear from the following discussion.

The rejection of claims 1-2 under 35 U.S.C. 103(a) as being unpatentable over Doi et al (JP 2000-323298-A) in view of Demos et al (US Patent Application Publication No. 2001/0008138-A1) is traversed insofar as it is applicable to the claims of this application.

Applicants note that only claims 8 and 9 remain in this application, and a rejection of claims 1 and 2 is necessarily directed to claims which have been canceled, as recognized by the Examiner. Thus, insofar as there is no rejection of claims 8 and 9 of this application, applicants submit that such claims stand allowed.

Insofar as the Examiner may contend that Doi et al and Demos et al are applicable to a rejection of claims 8 and 9, applicants note that the Examiner recognizes that "Doi et al fail to teach an end point determination and detection device, wherein the device detecting the end point of cleaning of the inner wall of the vacuum vessel by detecting emission wavelength of reaction products or a material of the vacuum vessel." It is noted that, as amended by the present amendment, the end point determination and detection means of claims 8 and 9 detect emission wavelength of reaction products generated when the cleaning of the vacuum vessel is effected or emission wavelength of products formed from the vacuum vessel generated when the cleaning of the vacuum vessel is effected utilizing a gas containing at least boron trichloride and chlorine supplied to the vacuum vessel and a voltage of at least 500 V supplied to the Faraday shield. Applicants submit that Doi et al fail to disclose or teach such recited features in addition to the features recognized by the Examiner as being absent in Doi et al, such that claims 8 and 9 patentably distinguish over Doi et al in the sense of 35 U.S.C. 103 and should be considered allowable thereover.

As to the requirements to support a rejection under 35 U.S.C. 103, reference is made to the decision of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988), wherein the court pointed out that the PTO has the burden under §103 to establish a prima facie case of

obviousness and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. As noted by the court, whether a particular combination might be "obvious to try" is not a legitimate test of patentability and obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. As further noted by the court, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

Furthermore, such requirements have been clarified in the recent decision of In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002) wherein the court in reversing an obviousness rejection indicated that deficiencies of the cited references cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge". The court pointed out:

> The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher."... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

The Examiner recognizing the deficiency of Doi et al contends that Demos et al teach a plasma processing apparatus including an optical emission detection

device for monitoring and detecting an end of the cleaning process of the inner wall of the processed chamber and the end point for plasma cleaning may be determined by optical emission technique wherein the emission from SiF line may be monitored at a predetermined wavelength during removing SiO_2 from the interior chamber surface. The Examiner therefore concludes that it would be obvious to implement the detection system as taught by Demos et al in the apparatus of Doi et al. Applicants submit that the Examiner has engaged in a hindsight reconstruction attempt utilizing the principle of "obvious to try" which is not the standard of 35 U.S.C. 103.

Irrespective of the contentions by the Examiner, applicants note that Demos et al fails to disclose or teach a Faraday shield and therefore provides no disclosure or teaching of supplying a voltage of at least 500 V to the Faraday shield, as now recited in the claims of this application. In this regard, Doi et al also does not disclose that a voltage of at least 500 V is applied to the Faraday shield when the vacuum vessel is cleaned. In accordance with the recited features of the present invention and as described and illustrated in Figs. 12(d) and 13(c), the cleaning of the vacuum vessel is effected utilizing a gas containing boron trichloride and chlorine. Doi et al fails to disclose or teach such feature, and Demos et al provides for utilization of a cleaning gas comprising a fluorine-based gas into the chamber with suitable fluorine-based gases being described in paragraph [0021]. Thus, it is readily apparent that Demos et al provides a disclosure and teaching different and away from the claimed features of claims 8 and 9, as amended. Accordingly, applicants submit that claims 8 and 9, as amended, patentably distinguish over any proposed combination of Doi et al and Demos et al in the sense of 35 U.S.C. 103, and such claims should be considered allowable thereover.

In view of the above amendments and remarks, applicants submit that the drawing objection has been overcome and claims 8 and 9, as amended, patentably

distinguish over the cited art and should be considered allowable thereover. Accordingly, issuance of an action of a favorable nature is courteously solicited.

To the extent necessary, applicant's petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (500.41295X00) and please credit any excess fees to such deposit account.

Respectfully submitted,

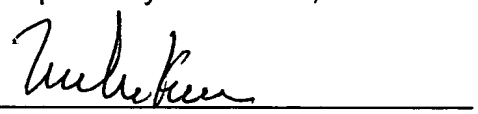

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FIG. 1

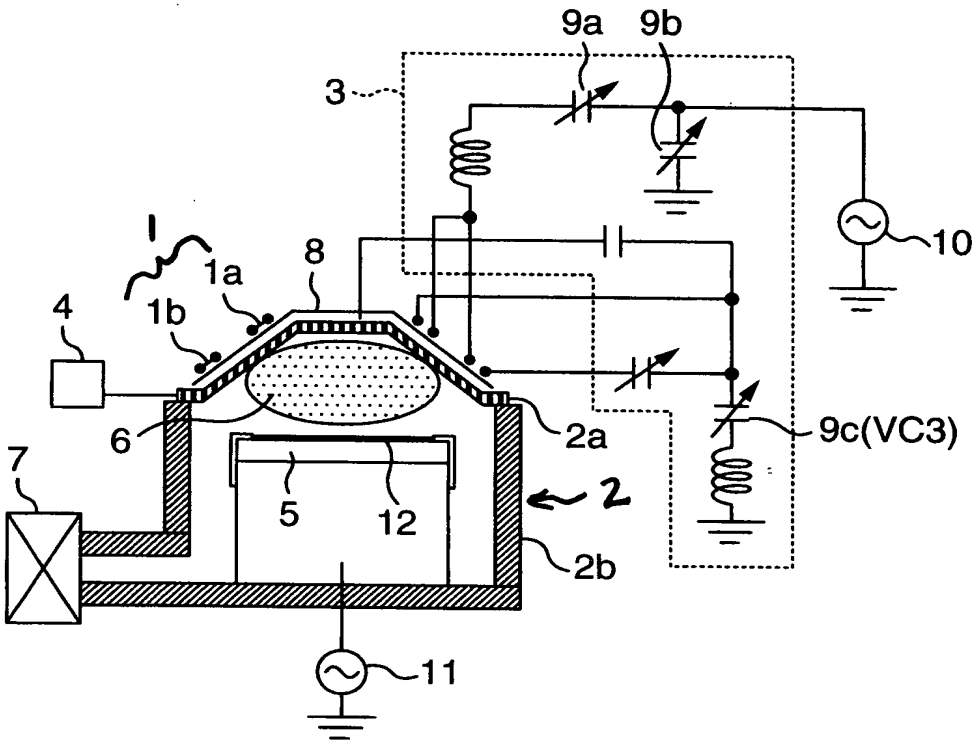

FIG. 2